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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,489	12/08/2003	Mark L. Enders	14300	4609

7590 08/23/2006  
Sally J. Brown  
AUTOLIV ASP, INC.  
3350 Airport Road  
Ogden, UT 84405

EXAMINER
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GOODEN JR, BARRY J

ART UNIT	PAPER NUMBER
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3616

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/731,489

Applicant(s)

ENDERS ET AL.

Examiner

Barry J. Gooden Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2006 (Amendment).
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 49-53 is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-15, 22-27, 29-31, 33-35, 41-43, 45, 46 and 48 is/are rejected.
- 7) ☒ Claim(s) 11, 16-21, 28, 32, 36-40, 44 and 47 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/8/03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This office action is in response to the amendment filed 6/12/2006.

#### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the airbag cushion contacting a vehicular steering column (Claims 13, 33, and 48) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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3. Claims 1-3, 12-14, 33, 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Ochiai et al., US Patent 6,224,093 B1.

In regards to claims 1-3 and 12-14, Ochiai et al. show a steering wheel assembly comprising:

a non-circular steering wheel (13);

an airbag module mounted to the steering wheel (13), the airbag module including an airbag inflator (20b), an inflatable airbag cushion (20c), and an airbag module housing (11,20a,21); and,

a deployable reaction surface for providing or receiving a reaction force for the airbag cushion (20c) when deployed and inflated;

wherein the deployable reaction surface is a component of the airbag module;

wherein the deployable reaction surface is at least a portion of the airbag module housing (11,20a,21) which deploys to provide a reaction force for the inflatable airbag cushion (20c);

wherein the deployable reaction surface is a portion (top or bottom) of the inflatable airbag cushion (20c);

wherein the deployable reaction surface comprises a reaction arm portion (top of the airbag cushion (20c)) of the inflatable airbag cushion (20c) which contacts a portion of a steering wheel (13), steering column or steering wheel shroud of a vehicle;

wherein the deployable reaction surface of the inflatable airbag cushion (20c) includes more than one reaction arm portion (top and bottom portions of the airbag cushion (20c)).

In regards to claims 33 and 35, Ochiai et al. shows an airbag module for use with a non-circular steering wheel comprising:

an airbag inflator (20b);

an airbag cushion (20c), the airbag cushion (20c) having an occupant face and a reaction arm portion that extends to abut a vehicular steering wheel (at 13 and 14), steering column or steering wheel shroud when installed in a vehicle and inflated to provide a reaction surface for the airbag cushion (20c); and,

an airbag module housing (11,20a,21).

In regards to claim 35, Ochiai et al. show a non-circular steering wheel (10) comprising a deployable reaction surface (reaction arm portion of the cushion (20c)) for a steering wheel (10) mounted airbag cushion (20c).

4. Claim 48 is rejected under 35 U.S.C. 102(b) as being anticipated by Sinnhuber, US Publication 2001/0054812 A1.

In regards to claim 48, Sinnhuber discloses all of the claimed elements including an airbag module for use with a non-circular steering wheel comprising:

an airbag inflator (11);

an airbag cushion (12), the airbag cushion having a cushion portion that inflates toward a vehicle occupant and two reaction arm portions that extend away from a vehicle occupant to contact a vehicular steering column (2) when installed in a vehicle and inflated, thus allowing the steering column to serve as a reaction surface for the airbag cushion; and,

an airbag module housing (Reference is made to Figure 1).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the

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examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ochiai et al. in view of Cart, US Patent 6,047,987.

In regards to claim 34, Ochiai et al. show all of the claimed elements except a steering wheel shroud.

Cart teaches a steering wheel shroud (30) being made of two separable parts (32,34).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the steering column of Ochiai et al. in view of the teachings of Cart to include steering wheel shrouds so as to provide a protective cover and increase aesthetic appearance.

8. Claims 4-9, 15, 22-26, 29-31, 41, 42, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ochiai et al. in view of Shiraki, US Patent 5,069,477.

In regards to claims 4-9, 15, 22, and 23, Ochiai et al. teach all of the claimed elements including wherein the deployable reaction surface (13,14) is a component of the steering wheel (10); yet Ochiai et al. do not teach the module housing having hingedly connected doors.

Shiraki teaches an airbag module having hingedly connected doors:

wherein the deployable reaction surface (40) is at least portion of the airbag module housing (30) which deploys to provide a reaction force for the inflatable airbag cushion (1);

wherein the deployable reaction surface (40) is at least two individual portions (See Figure 3) of the airbag module housing (30) which deploy to provide a reaction force for the inflatable airbag cushion (1);

wherein the portion of the airbag module housing (30) which deploys to provide a reaction force for the airbag cushion (1) is positioned to deploy into a position about the steering wheel;

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wherein the portion of the airbag module housing (30) deploys into a position about the steering wheel not occupied by a portion of the steering wheel and below a space occupied by the airbag cushion (1) when inflated;

wherein the at least two individual portions (See Figure 3) of the airbag module housing (30) included in the reaction surface are positioned at about the 12:00 and 6:00 positions of the steering wheel;

wherein the individual portions (40) of the airbag module housing (30) included in the reaction surface comprise movable plates (40);

wherein the movable plates (40) are hinged (X) plates positioned about the airbag cushion (1) in the airbag module which deploy outwardly (See Figure 1) upon inflation of the airbag cushion (1);

wherein the deployable reaction surface (the reaction surface is the point at which the airbag contacts another surface thus creating a "reaction surface") is a portion of the inflatable airbag cushion (1);

wherein the deployable reaction surface (40) further includes at least one portion of the airbag housing (30); and,

wherein the deployable reaction surface (40) includes two individual portions (See Figure 3) of the airbag housing (30).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the module housing of Ochiai et al. in view of the teachings of Shiraki to include hingedly connected doors so as to provide a protective cover for the airbag device which will allow the airbag to deploy in a guided manner.

In regards to claims 24-26 and 29-31, Ochiai et al. teach all of the claimed elements as detailed in Office Action Item 2 and 6 above.

Ochiai et al. do not teach the module housing having hingedly connected doors.

Shiraki teaches a module housing having hingedly connected doors.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the module housing of Ochiai et al. in view of the teachings of Shiraki to include hingedly connected doors so as to provide a protective cover for the airbag device which will allow the airbag to deploy in a guided manner.

In regards to claims 41, 42, and 45, Ochiai et al. teach all of the claimed elements as detailed in Office Action Item 2 and 6 above.

Ochiai et al. do not teach the module housing having hingedly connected doors.

Shiraki teaches a module housing having hingedly connected doors.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the module housing of Ochiai et al. in view of the teachings of Shiraki to include hingedly connected doors so as to provide a protective cover for the airbag device which will allow the airbag to deploy in a guided manner.

9. Claims 10, 27, 31, 43, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ochiai et al. in view of Shiraki as applied to claims 9, 26, 29, 42, and 45 respectively above, and further in view of Lang, US Patent 6,364,345 B1.

In regards to claims 10, 27, 31, 43 and 46, the combination of Ochiai et al. in view of Shiraki teaches all of the claimed elements as detailed in Office Action Item 2 and 6 above, except for the hingedly connected doors being spring-loaded.

Lang teaches a hingedly connected door being spring-loaded.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the module housing with hingedly connected doors in view of the teachings of Lang to include the hingedly connected doors being spring loaded so as to facilitate the deployment of the hingedly connected doors.



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***Allowable Subject Matter***

10. Claims 11, 16-21, 28, 32, 36-40, 44, and 47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Claims 49-53 are allowed.

12. The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not disclose a non-circular steering wheel comprising two handles, individually comprised of first and second handle portions that separate to deploy deployable reaction surfaces.

***Response to Arguments***

13. Applicant's arguments filed 6/12/2006 have been fully considered but they are not persuasive.

With respect to the applicant's argument that Ochiai does not disclose a "deployable reaction surface", examiner maintains as broadly recited Ochiai discloses a "deployable reaction surface".

With respect to the applicant's argument that Ochiai does not disclose "reaction arm portions", examiner maintains as broadly recited Ochiai discloses "reaction arm portions".

14. Applicant's arguments with respect to claim 48 have been considered but are moot in view of the new ground(s) of rejection.

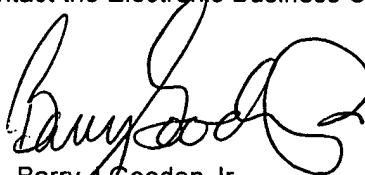
***Conclusion***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barry J. Gooden Jr. whose telephone number is (571) 272-5135. The examiner can normally be reached on Monday-Friday 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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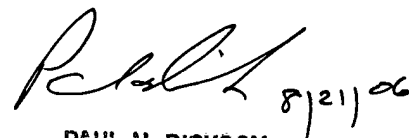
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Barry J. Gooden Jr.  
Examiner  
Art Unit 3616

8/21/06

BJG



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